

**UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF ILLINOIS
EASTERN DIVISION**

ClearOne, Inc.,

Plaintiff,

vs.

Shure Incorporated,

Defendant.

Case Number 19-cv-2421

Jury Trial Demanded

**COMPLAINT FOR PATENT INFRINGEMENT AND TRADE SECRET
MISAPPROPRIATION**

Plaintiff ClearOne, Inc. (“ClearOne”) files this Complaint against Defendant Shure Incorporated (“Shure”), and alleges as follows:

INTRODUCTION

1. ClearOne brings this action to stop Shure from its predatory actions against ClearOne, including wrongful and willful infringement of ClearOne’s market-leading, patented audio conferencing technologies and intentional misappropriation of ClearOne’s valuable trade secrets related to its products.¹

2. Despite being a small public company, ClearOne had grown into the global market leader in the installed audio conferencing market and a leading provider of premium audio conferencing systems and other related products for audio, video, and web conferencing applications. As a market leader, ClearOne is focused on developing cutting-edge conferencing and collaboration products. Through decades of innovation, investment, and effort by

¹ Pursuant to Shure’s objection to public disclosure of internal Shure documents and related material, ClearOne has redacted references to specific evidence of Shure’s trade secret misappropriation from the public version of this Complaint.

ClearOne's inventors and engineers, ClearOne has developed industry-leading products and a portfolio of approximately 100 issued patents and pending patent applications.

3. No later than 2010, ClearOne inventors conceived and developed a beamforming microphone conferencing system that was designed to replace up to a dozen individual microphones with a compact beamforming microphone array that could be placed overhead or otherwise out of the way and yet have superior audio quality and clarity. Over the next several years, ClearOne developed this beamforming microphone conferencing system and also conceived and developed other inventions involving related technology. In 2012, ClearOne was first to market with this beamforming audio conferencing technology – the Beamforming Microphone Array (“BMA”) audio conferencing system – which combined beamforming with acoustic echo cancellation and adaptive steering or smart beam selection to provide superior audio performance and clarity.



4. To protect its industry-leading technology, ClearOne filed provisional and utility patent applications, including United States Patent Application No. 13/493,921 (the “’921 Application”) entitled “Methods and Apparatuses for Echo Cancellation with Beamforming Microphone Arrays.” The ’921 Application issued as United States Patent No. 9,264,553 (the “’553 Patent”). A true and correct copy of the ’553 Patent is included as Exhibit A.

5. Once it was ready to sell the BMA, ClearOne encountered the issue of how to price the BMA conferencing system. Since ClearOne's beamforming microphone conferencing

system was unique in the market, there was little precedent for what ClearOne should charge for the system. Accordingly, ClearOne spent significant time and effort developing highly confidential pricing lists for the BMA, including standard discounts to appeal to manufacturer representatives, dealers, resellers, and distributors, and special pricing to drive sales of this new product.

6. These highly confidential price lists carry significant value to ClearOne, and a competitor's access to these price lists would harm ClearOne's ability to compete. By maintaining the price lists confidentially, ClearOne is able to offer preferential pricing and confidential discounts. Indeed, even ClearOne partners are not permitted to share pricelists with other partners because pricing differs among different ClearOne partners. This enables ClearOne to sell more of its products and thereby positions ClearOne as the most price-effective solution. And it allows ClearOne to maintain fair pricing among various partners and partner levels. If the price lists were made public or released to ClearOne's competitors, the competitors could simply undercut ClearOne's prices (or offer more advantageous bundle pricing) and thereby steal customers that could have otherwise bought ClearOne products. And by continually undercutting ClearOne prices, the competitors would gain goodwill and reputational benefits by appearing to be more price-competitive than ClearOne. In addition, knowing ClearOne's price lists would help the competitors better position their products in the market and save significant time in price discovery (a process where the manufacturer keeps adjusting prices to get the desired sales volume).

7. Accordingly, ClearOne maintains these lists as trade secrets, including by restricting access to them both internally and externally to only those who need to use or see them (those with a "need to know") in order to further ClearOne's business. And before sharing

these highly confidential price lists with a limited number of manufacturer representatives, dealers, resellers, distributors, and employees, ClearOne marks them “Confidential” and includes strict confidentiality clauses in its contracts to protect the price lists from disclosure.

8. Due to the innovative nature of ClearOne’s BMA and the BMA’s significant commercial success upon entry into the market, ClearOne has been recognized several times for its continued innovation and excellence in the installed audio conferencing market.

9. Shure is a large microphone and audio company that sells products throughout the world. Witnessing the success of the ClearOne BMA in the audio conferencing market, Shure embarked on a coordinated campaign to capture market share from ClearOne. But it went about doing so in an unfair and improper manner. Within three years of the BMA’s release, Shure released its own competing products: the MXA910 Ceiling Microphone Array (“MXA910”) and the Microflex Advance Table Array microphone (the “MXA310”). The MXA910 and MXA310, as designed and operated, make pervasive use of ClearOne’s patented technology and infringe ClearOne’s ’553 Patent.

10. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

11. ClearOne files this Complaint to hold Shure responsible for its deleterious

conduct and prevent it from further harming ClearOne. ClearOne seeks injunctive relief barring Shure from infringing ClearOne's patented technology and from further acquiring and using ClearOne's trade secrets, damages for Shure's past infringement and trade secret misappropriation, punitive and treble damages to hold Shure responsible for its conduct, and ClearOne's attorneys' fees and costs associated with this action.

JURISDICTION AND VENUE

12. ClearOne's claim for patent infringement arises under the Patent Laws of the United States, 35 U.S.C. § 101 et seq. ClearOne's claim for trade secret misappropriation arises under the Defend Trade Secrets Act, 18 U.S.C. § 1836, et seq. Accordingly, this Court has subject matter jurisdiction over this Complaint and Shure pursuant to 28 U.S.C. §§ 1331, 1338(a), 1367.

13. This Court has personal jurisdiction over Shure in this matter. Among other things, Shure's headquarters are located at 5800 West Touhy Avenue in Niles, Illinois 60714 and it regularly transacts business in Illinois. Shure has also caused injury to ClearOne in Illinois through its willful patent infringement and trade secret misappropriation.

14. Venue is proper in this district under 28 U.S.C. §§ 1391(b) & (c) and/or 1400(b).

PARTIES

ClearOne, Inc.

15. ClearOne is a small public corporation, incorporated in Utah, with a principal place of business at 5225 Wiley Post Way, Suite 500, Salt Lake City, Utah 84116.

16. ClearOne was founded in 1983. Since its inception, ClearOne has grown to become a company dedicated to the design, development, marketing, and sales of conferencing, collaboration, and network streaming solutions for voice and visual communications. ClearOne

has created hundreds of new products that improve people's ability to collaborate and communicate, whether they are in the same room or on opposite sides of the globe.

17. ClearOne's commitment to innovation and quality in the field of voice and visual communication solutions is well known. ClearOne has developed several industry firsts including, but not limited to:

- First professional-grade Beamforming Microphone Array;
- First product to use Distributed Acoustic Echo Cancellation in an audio conferencing system;
- First conference phone to provide wireless conferencing;
- First fully-scalable conference phones that daisy-chain multiple phone units;
- First product to bridge the wide price/performance gap that existed between plug-and-play tabletop conferencing phones and professionally-installed audio conferencing systems; and
- First product that is a complete professional video collaboration system with state-of-the-art audio and video technology, and a patented ceiling tile beamforming mic array designed for medium and large meeting rooms.

18. Today, installed audio conferencing is one of ClearOne's core businesses, and, before Shure's willful infringement and misappropriation, ClearOne had become the market leader in that field, with over 50% of the global market. ClearOne's products have been used by thousands of organizations worldwide, including schools, government entities, medical facilities, law firms, businesses, and houses of worship.

Shure Incorporated

19. Shure is a private corporation, incorporated in Illinois, with its principal place of

business at 5800 W. Touhy Avenue, Niles, Illinois 60714.

20. Shure designs and manufactures audio systems. Shure's products include wireless and wired microphone systems, digital signal processors, and personal monitor systems, among others. Shure is a competitor of ClearOne.

21. Shure advertises, encourages, and instructs its customers to make and use integrated systems consisting of its beamforming microphones (such as the Shure MXA910 and MXA310), as well as acoustic echo cancellation products from other companies (such as QSC's Q-SYS platform and Biamp's Tesira/TesiraFORTE audio processors and software).

22. The performance of these integrated systems plays a key role in Shure's ability to compete effectively in the audio-visual conferencing market.

23. Shure is aware that ClearOne has patents relating to beamforming audio conferencing systems.

24. [REDACTED]

[REDACTED]

[REDACTED]

RELEVANT NONPARTIES

Biamp Systems Corporation

25. Biamp is a private corporation, incorporated in Delaware, with a principal place of business at 9300 S.W. Gemini Drive, Beaverton, Oregon 97008.

26. Biamp designs and manufactures audio and video systems. Biamp's products include networked digital audio platforms, digital signal processors, and scalable media systems for digital audio networking, among others. Biamp is a competitor of ClearOne.

27. Biamp advertises, encourages, and instructs its customers to make and use

integrated systems consisting of its acoustic echo cancellation products (such as its Tesira/TesiraFORTE audio processors and software) and the Shure MXA910 and MXA310 microphones.

28. The performance of these integrated systems plays a key role in Biamp's ability to compete effectively in the audio conferencing market.

29. Biamp is aware that ClearOne has at least two patents relating to beamforming audio conferencing systems.

QSC, LLC

30. QSC is a private company organized as a California limited liability company with its principal place of business at 1675 MacArthur Blvd., Costa Mesa, California 92626.

31. QSC designs and manufactures audio systems. QSC's products include power amplifiers, loudspeakers, audio DSP mixers, and networked audio and control. QSC is a competitor of ClearOne.

32. QSC advertises, encourages, and instructs its customers to make and use integrated systems consisting of its acoustic echo cancellation products (such as its Q-SYS platform) and the Shure MXA910 and MXA310 microphones.

33. The performance of these integrated systems plays a key role in QSC's ability to compete effectively in the audio conferencing market.

34. QSC is aware that ClearOne has at least two patents relating to beamforming audio conferencing systems.

BACKGROUND OF THE TECHNOLOGY

35. The technology at issue in this case pertains generally to the field of digital signal processing techniques, as used primarily in audio and video teleconferencing systems that are

often deployed in conference rooms.

36. Beamforming, also known as spatial filtering, is a signal processing technique used in sensor arrays for directional signal transmission or reception. Beamforming can be used to select desired sound sources, while rejecting unwanted sounds. In an audio conferencing system, beamforming can be used to select, or focus on, a participant's voice, while rejecting noise and interfering speech, in order to provide superior audio performance and clarity.

37. Another related and important technology in audio conferencing is acoustic echo cancellation. Acoustic echo cancellation involves recognizing an echo, and then reducing or removing it by subtracting it from a transmitted signal. For example, during an audio conference, the voice of a speaker on one end of a conference line is output through speakers at the other end of the conference line. Often, that speaker output is then picked up by the microphones on the same end of the conference line, and relayed back to the original speaker as undesirable echo. Acoustic echo cancellation reduces, eliminates, or minimizes this effect.

38. ClearOne was at the forefront of integrating beamforming microphone arrays with acoustic echo cancellation. ClearOne's '553 Patent covers methods and apparatuses that, among other things: (1) perform a beamforming operation that combines a plurality of microphone signals into a smaller number of combined signals that each correspond to a different fixed beam; and (2) performs an acoustic echo cancellation operation on the combined signals.

39. The '553 Patent employs a particular "hybrid" method, wherein microphone signals are beamformed into a plurality of fixed beams, and echo cancellation is then applied to those fixed beams. Performing the echo cancellation step on pre-formed, fixed beams minimizes the computer processing effort involved in acoustic echo cancellation, while also keeping the absolute number of echo cancellers to a minimum. This solves two problems that plagued other

methods at the time of invention of the '553 Patent.

40. Ashutosh Pandey, Darrin Thurston, David Lambert, and Tracy Bathurst, the inventors of the '553 Patent, created the methods recited therein after unsuccessful attempts to develop other beamforming and echo cancellation technologies. For example, Mr. Pandey and his team members worked for over a year on a project that performed acoustic echo cancellation first, and then conducted beamforming using the output of each microphone signal. This project was ultimately scrapped due to high costs, high processing requirements, and insufficient sound quality.

41. Pandey and his co-inventors then went back to the drawing board and began developing a beamforming microphone array that would use fixed beams. Ultimately, they realized that they could dramatically reduce processing requirements and achieve excellent sound quality by *first* using a digital signal processor ("DSP") to perform a beamforming algorithm and *then* performing AEC on the signals of each fixed beams, rather than performing AEC on the output of each microphone. The result was a new technology with significant cost and processing improvements and excellent sound quality. It is this new technology that is described and claimed in the '553 Patent.

42. ClearOne currently employs the technology in the '553 Patent in its Beamforming Microphone Array and CONVERGE Pro products, both of which are now in their second generation. ClearOne also employs the technology in its BMA CT ceiling tile beamforming microphone array, ClearOne's third-generation product.

SHURE'S INFRINGEMENT OF CLEARONE'S '553 PATENT

43. In or around January 2016, Shure announced the release of its MXA910 (Ceiling Array) and MXA310 (Table Array) microphones. The microphones began shipping later that

year, in August 2016. Shure continues to sell both microphone products today.

44. The Shure MXA910 and MXA310 microphones utilize the technology in the '553 Patent. Both Shure microphone products offer the same beamforming as that claimed in the '553 Patent. Specifically, they, among other things: perform a beamforming operation with a beamforming module; combine “[m]ultiple mic elements together to produce multiple, highly-directional pickup lobes”; and combine a plurality of microphone signals such that each of the plurality of combined signals corresponds to a different fixed beam.

45. Shure’s MXA910 and MXA310 microphones also require acoustic echo cancellation (“AEC”). To provide this functionality, Shure directs end users to use digital signal processors with Shure’s MXA910 and MXA310 microphones. At first, Shure encouraged the use of QSC’s Q-SYS platform and Biamp’s Tesira/TesiraFORTE audio processors and software—both of which provide the required AEC—with their MXA910 and MXA310 microphones. Now, Shure also offers its own digital signal processor, the Shure IntelliMix P300.

46. Combined with a DSP, the Shure MXA910 and MXA310 microphones offer the same combination of beamforming and acoustic echo cancellation as ClearOne’s BMA. In fact, upon its release of the MXA910 and MXA310, Shure become the only company in the United States to sell a substantially similar beamforming microphone array to ClearOne’s BMA. Shure’s infringement, on its own and in combination with others, has harmed ClearOne’s investments in technology and its reputation as a leader and innovator.

SHURE’S KNOWLEDGE AND WILLFUL PATENT INFRINGEMENT

47. Shure has knowingly infringed and willingly continued to infringe the '553 Patent by selling its MXA910 and MXA310 products, even after challenging ClearOne’s '553 Patent in federal court and unsuccessfully with the PTAB.

48. On April 24, 2017, Shure filed an action in the U.S. District Court for the Northern District of Illinois seeking a declaratory judgment of noninfringement and invalidity of the '553 Patent. *Shure Inc. v. ClearOne, Inc.*, Case No. 17-cv-03078 (N.D. Ill.).

49. ClearOne had filed an application for reissue of the '553 Patent on April 16, 2017, prior to Shure's complaint. On July 14, 2017, Shure filed a petition for *Inter Partes* Review ("IPR") of the '553 Patent, and on January 29, 2018, the Patent Trial and Appeal Board ("PTAB") instituted IPR proceedings for the '553 Patent.

50. On March 16, 2018, the Court declined to exercise jurisdiction over Shure's declaratory judgment claim with respect to the '553 Patent, noting that "[t]he '553 patent is currently in reissuance proceedings before the Patent and Trademark Office, and the Patent Trial and Appeal Board recently granted *inter partes* review of the patent." (*See Shure Inc. v. ClearOne, Inc.*, Case No. 17-cv-03078 at Dkt. 280.)

51. On January 24, 2019, the PTAB issued its unanimous Final Written Decision for the IPR of the '553 Patent, finding that Shure "ha[d] not demonstrated by a preponderance of the evidence that any of [the challenged claims] are unpatentable under 35 U.S.C. §§ 103(a)." (*See* Case No. 17-cv-03078 at Dkt. 478, Ex. A.) The PTAB panel which reached this decision consisted of three technically trained administrative patent judges: Dr. Kevin Turner (Ph.D., Physics), Joni Chang (B.Sc., Chemical Engineering), and Arthur Peslak (M.Sc., Mechanical Engineering). According to a 2017 publication, Judges Chang and Turner are two of the PTAB's most experienced patent judges; both Judge Chang and Judge Turner have presided over more than 400 PTAB trials.

52. Shure filed a Request for Rehearing ("Request") of the PTAB's Final Written Decision on February 22, 2019. Just over a month later, on March 25, 2019, the PTAB denied

Shure's Request, holding, among other things, that Shure's contentions were "without merit," "not persuasive," and "unavailing." Under the law—including 35 U.S.C. § 325(e)(2)—Shure should be estopped from asserting invalidity of the '553 Patent "on any ground that [it] raised or reasonably could have raised during th[e] post-grant review."

SHURE'S MISAPPROPRIATION OF CLEARONE TRADE SECRETS

53. In the audio conferencing market, two of the principal factors that market participants, including manufacturer representatives, dealers, resellers, and distributors, take into account when choosing a conferencing product are technology and pricing. As discussed above, the BMA became successful in large part due to its unique technology—yielding improved performance—and the functionalities it could offer because of that technology. But another important driver of success for the BMA—along with ClearOne's other products—was pricing.

54. Before the BMA was first released, ClearOne spent considerable time deliberating about what the right price should be for a product with such unique technology and resultant performance. It was an arduous task, because there was no directly competitive product that it could be compared to. Accordingly, ClearOne developed pricing for the BMA by examining, among other things, the benefits the BMA offered above and beyond benefits offered by existing products at the time, costs of procuring and installing existing products, and costs of manufacturing the BMA. ClearOne then worked into its pricing tiered discounts for its manufacturer representatives, dealers, resellers, and distributors based on purchasing volume and other factors. ClearOne developed this pricing to gain a competitive advantage over other products in the market.

55. Price lists are a "secret sauce" in the audio-visual conferencing industry. The publicly-available MSRP prices for conferencing products have only indicative value, as bids for

projects are rarely won based on MSRP prices. Instead, dealers, integrators, and use resellers win bids by offering confidential discounts and preferential pricing. Industry participants thus take significant measures and time to develop their price lists, and to ensure that they are not being released to their competitors.

56. ClearOne memorialized its prices for the BMA and its other products in highly confidential distributor and dealer price lists, specific to each region that it operated in. In the United States, ClearOne called these price lists “North America Pricing Guides.” Price lists in the United States were offered under different tiers, namely Distributor, Platinum Dealer, Gold Dealer and Dealer. ClearOne shared these price lists with its manufacturer representatives, dealers, resellers, and distributors to ensure that they had up-to-date pricing—applicable to particular distributors or dealers based on the tier to which they belonged—when deciding between ClearOne and other products for end users. And ClearOne ensured that the dealers, resellers, and distributors got access to only the price list applicable to them based on whether they were a Distributor, a Platinum Dealer, a Gold Dealer, or a Dealer.

57. Although ClearOne had to share its highly confidential price lists to carry out its business, ClearOne took numerous steps to keep the price lists confidential, and especially to keep the price lists out of the hands of ClearOne’s competitors. It was—and is—important for ClearOne to keep the price lists secret because the price lists provide ClearOne a competitive advantage in selling its products. ClearOne strategically uses the price lists to offer confidential discounts and preferential pricing to be competitive and win projects. ClearOne has a clear advantage in the market when it can provide the best conferencing product at the best prices. However, if the price lists were disclosed publicly, competitors—like Shure—could use the knowledge of ClearOne’s confidential discounts and preferential pricing to undercut ClearOne’s

prices. The competitors would then be positioned as the more price-efficient conferencing option and would gain goodwill from manufacturer representatives, dealers, resellers, distributors, and end users at the expense of ClearOne. In addition, even if competitors who got access to ClearOne's highly confidential price lists did not use those lists to undercut ClearOne's prices, they could use their knowledge of ClearOne's prices to, among other things, protect their price from getting too low and save time by not bidding for projects that they know, based on ClearOne's prices, would not let them obtain the required margins. Moreover, competitors could quote a slightly lower price than they would otherwise—even if higher than ClearOne's—and then attempt to justify their only-slightly-increased price to purchasers.

58. ClearOne's efforts to maintain the confidentiality of the price lists started with marking every page of the price lists with a "ClearOne Confidential" stamp to make it clear to any reader that the price lists were (and contained) ClearOne's confidential information.

59. Internally, ClearOne locks down and secures access to the highly confidential price lists. IT restricts access to the price lists to only those ClearOne employees who have a need to access and view the price lists—*e.g.*, an engineer does not have access to the price lists. If an employee without access wants to obtain access to the price lists, the employee needs to get authorization from his/her manager and then also obtain authorization from the ClearOne Sr. Vice President of Finance. Once granted access, the employee only has access to the specific price lists they require, not every ClearOne price list. For example, sales persons only have access to the price lists applicable to their regions. These strict requirements are part of ClearOne's internal IT controls that are key to its public reporting and in compliance with the requirements of the Sarbanes-Oxley Act of 2002. These practices and policies have been in place at all times relevant to this lawsuit.

60. Moreover, ClearOne employees are, as a condition of their employment, required to execute a non-disclosure agreement in which they agree, among other things, not to improperly use and/or disclose ClearOne confidential information and trade secrets during or after the course of their employment at ClearOne. ClearOne employees are reminded of their covenants of confidentiality throughout their employment, including in the Employee Handbook, which they need to periodically sign to acknowledge receipt and understanding. Employees' confidentiality obligations pursuant to these signed agreements apply throughout their employment and beyond termination.

61. Similar restrictions apply to external recipients, including sales channel partners such as manufacturer representatives, dealers, resellers, and distributors. Before sending any highly confidential price lists, ClearOne requires external recipients to sign agreements with broad confidentiality clauses that prohibit them from disclosing this confidential information to anyone outside of ClearOne's sales channel or to anyone without a need to know. For example, one such confidentiality clause states:

“Reseller understands and acknowledges that in order to facilitate the business arrangements contemplated by this Agreement, certain confidential and proprietary technical, financial and/or business information of ClearOne will be disclosed to Reseller. This confidential and proprietary information includes, without limitation, all proprietary inventions, sales support materials, processes, product design(s), drawing and schematics of product design(s), methods of doing business, pricing, marketing programs, and other data and information, whether patented or not, heretofore or hereafter developed or acquired by ClearOne in the course of the design, manufacture, marketing, or sale of or otherwise relating to the Products or future conceptual or unreleased products. Reseller

acknowledges that all ClearOne Confidential Information is the exclusive property and trade secrets of ClearOne. Reseller agrees not to use or disclose any ClearOne

Confidential Information in any manner adverse to the best interests of ClearOne.”

Finally, ClearOne only sends external partners the specific price list applicable to them, which depends on their region and purchasing tier. For example, a dealer in Illinois in March 2016 would only receive the North American Dealer price list for March 2016 that relates to that dealer’s partner level, not the price lists for any other region, any other period, or any other partner level. ClearOne transmits the highly confidential price lists via e-mail to external partners in e-mails that state that the “electronic mail message and any attachment is confidential.”

62. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

63. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

64. [REDACTED]

[REDACTED]

65. [REDACTED]

[REDACTED]

66. [REDACTED]

[REDACTED]

67. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

68. Shure's brazen and illegal conduct has yielded it considerable benefit. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

69. The effects on ClearOne are also clear: among other things, lost sales and loss of goodwill due to Shure's anticompetitive behavior.

COUNT I

Claim for Relief for Patent Infringement of the '553 Patent

70. ClearOne incorporates by reference paragraphs 1 through 69 and Exhibits A-G attached hereto.

71. ClearOne is the owner of all rights, title, and interest in the '553 Patent. The '553 Patent issued on February 16, 2016.

72. The '553 Patent is valid and enforceable. Indeed, under the law—including

35 U.S.C. § 325(e)(2)—Shure should be estopped from asserting invalidity “on any ground that [it] raised or reasonably could have raised” during the IPR Shure lost while attempting to challenge the validity of the ’553 Patent.

73. Defendant Shure manufactures, uses, offers to sell, and sells beamforming microphone arrays and digital signal processing platforms and thereby directly infringes at least one claim of the ’553 Patent. Shure advertises, encourages, and instructs its customers to make, use, offer to sell, and/or sell infringing integrated systems consisting of Shure’s beamforming microphones (such as the MXA910 and MXA310) and digital signal processors that perform acoustic echo cancellation (such as Shure’s IntelliMix P300, QSC’s Q-SYS platform, and Biamp’s Tesira/TesiraFORTE audio processors and software). Upon information and belief, the Shure beamforming microphones practice a material part of the claimed invention of the ’553 Patent, have no substantial non-infringing use, and are marketed and sold to be used together with a digital signal processor that performs acoustic echo cancellation.

74. Shure’s beamforming microphones are intended for audio and video conferencing. *See, e.g.*, Exhibit H (Shure MXA310 User Guide Excerpt) at 1 (“The Microflex® Advance™ table array is a premium networked tabletop microphone for AV conferencing environments, including boardrooms, huddle rooms, and multi-purpose spaces.”); Exhibit I (Shure MXA910 User Guide Excerpt) at 1 (“The Microflex® Advance™ Ceiling Array is a premium networked array microphone for AV conferencing environments, including boardrooms, huddle rooms, and multi-purpose spaces.”). Upon information and belief, for audio conferencing purposes, the Shure MXA910 and MXA310 beamforming microphones require acoustic echo cancellation (“AEC”). The AEC functionality is provided to the MXA910 by digital signal processors such as by Shure’s IntelliMix P300, QSC’s Q-SYS platform, and

Biamp's Tesira/TesiraFORTE audio processors and software. These integrated systems thus infringe the '553 patent, including by performing beamforming operations that combine microphone signals into signals corresponding to fixed beams, and then perform acoustic echo cancellation on the combined signals.

75. In addition, Shure has formed joint enterprises with several AV hardware and software providers, including both Biamp and QSC, to manufacture and sell these infringing integrated systems to customers. *See, e.g.*, Exhibit J (2017-02-07 Press Release) ("Shure Expands Partnership Program With Leading AV Hardware and Software Providers ... [including] Biamp, QSC"); Exhibit K (QSC-Shure Software Integration Alliance (accessed Apr. 9, 2019)) ("Shure and QSC have co-developed a control plugin for their Microflex Wireless microphone series." In addition, specific microphones in the Shure catalog, including the Microflex Wireless series, can pass audio to the Q-SYS Platform via AES67, all without additional Dante I/O card hardware."); Exhibit L (2017-01-09 Press Release) ("QSC, LLC and Shure Incorporated are proud to announce an expanded level of integration between Shure Microflex® Advance™ and Microflex® Wireless microphones with the entire Q-SYS™ Platform. The partnership includes the release of new control plug-ins for the Shure MXA910 Ceiling Array Microphone and Microflex Wireless microphone systems."); Exhibit M (2016-12-06 Press Release) (Biamp is "excited to come together with an industry leader like Shure in an effort to streamline the integration of [their] products"; "Adding Shure microphone-specific software blocks to [Biamp] Tesira's cutting-edge software made sense; it allows system designers to easily incorporate the power of Shure mics with the power of [Biamp] Tesira."); Exhibit N (2018-10-02 Biamp Article) ("The purpose of this article is to provide a starting point to aid in the successful deployment of the [Biamp] TesiraFORTÉ DAN with Shure

MXA910 and/or MXA310 microphone arrays.”); Exhibit O (Shure Q&A) (answering that customers can use QSC Qsys with MXA310). Shure thereby jointly infringes one or more claims of the ’553 Patent, including claims 1, 8, and 15 of the ’553 Patent, by conditioning the receipt of a benefit to the end user on performing the steps outlined in the ’553 Patent. And Shure uses, offers to sell and/or sells in the United States, and/or imports into United States, the infringing integrated systems.

76. Shure has also induced and continues to induce infringement of one or more claims of the ’553 Patent, including, without limitation, claims 1, 8, and 15 of the ’553 Patent, by supplying, advertising and/or providing instructions for the infringing integrated systems with the specific intent that its customers infringe the ’553 Patent despite knowledge that its customers’ induced acts infringe the ’553 Patent. Shure has also contributorily infringed and continues to contributorily infringe one or more claims of the ’553 Patent, including, without limitation, claims 1, 8, and 15 of the ’553 Patent, by, despite its knowledge of the ’553 Patent, offering to sell and selling within the United States, or importing into the United States, material components of the claimed invention in the ’553 Patent that have no substantial non-infringing use to Shure’s customers, knowing such components are especially made or adapted for use to infringe the ’553 Patent.

77. In addition, upon information and belief, Shure has supplied and continues to supply—from the United States to foreign countries—the individual components (including hardware, software, and firmware) of the MXA910, MXA310, and IntelliMix P300 which constitute all or a substantial portion of the components of the apparatus claimed in the ’553 Patent. Shure is inducing the combination of these individual components—into the apparatus claimed in the ’553 Patent—outside of the United States in at least Shure’s Juarez, Mexico

manufacturing plant.

78. Upon information and belief, Shure has also supplied and continues to supply—from the United States to foreign countries including but not limited to China, Brazil, and Germany—the completed MXA910, MXA310, and IntelliMix P300, which individually constitute a substantial portion of the components of the '553 Patent. Shure is inducing its customers into combining the MXA910 and MXA310 with the P300, Tesira/TesiraFORTE, or Q-SYS audio DSP mixers outside of the United States.

79. Shure is intending and inducing each of the aforementioned combinations despite its knowledge that these combinations would infringe the '553 Patent if they occurred in the United States.

80. In addition, upon information and belief, Shure has supplied and continues to supply—from the United States to foreign countries including but not limited to China, Brazil, and Germany—the MXA910 and MXA310 microphones, despite knowing that it is not a staple article suitable for substantial noninfringing use, but is especially made or adapted for use in an infringing combination with the P300, Tesira/TesiraFORTE, or Q-SYS. Shure is intending that the MXA910 and MXA310 be combined with the P300, Tesira/TesiraFORTE, or Q-SYS.

81. Shure is intending and inducing each of the aforementioned combinations despite its knowledge that these combinations would infringe the '553 Patent if they occurred in the United States.

82. Shure knew of the '921 Application, including after its issuance as the '553 Patent. Indeed, Shure filed litigation against ClearOne relating to the '553 Patent.

83. Shure's infringement is willful.

84. ClearOne has suffered and continues to suffer damages and irreparable harm

because of Shure's past and ongoing infringement.

85. Unless Shure's infringement is enjoined, ClearOne will continue to be damaged and irreparably harmed. ClearOne meets the criteria for, and is entitled to, temporary, preliminary, and permanent injunctive relief.

COUNT II

Claim for Misappropriation of Trade Secrets Under the Defend Trade Secrets Act (18 U.S.C. § 1836, et seq.)

86. ClearOne incorporates by reference paragraphs 1 through 85 and Exhibits A-O attached hereto.

87. ClearOne's highly confidential price lists constitute protectable trade secrets under the federal Defend Trade Secrets Act, codified at 18 U.S.C. § 1836 et seq. ("DTSA"). ClearOne's successful business is directly dependent upon maintaining the secrecy of its trade secrets and other confidential and proprietary information. ClearOne's nonpublic price lists for its products are business and economic information. The price lists derive independent economic value from being nonpublic because they provide ClearOne a competitive advantage in being able to offer preferable pricing to sell its products. If the price lists were publicly available, ClearOne's competitors would be able to use the price lists to, among other things, undercut ClearOne and win sales and harm ClearOne's ability to maintain fair and orderly pricing among its channel partners.

88. ClearOne's highly confidential price lists are meant to be used to sell ClearOne's products throughout the United States and worldwide. Accordingly, ClearOne's trade secrets at issue are related to a product or service used in, or intended for use in, interstate commerce.

89. ClearOne takes reasonable measures to keep its highly confidential price lists confidential. For example, it includes broad confidentiality provisions in its contracts with

manufacturer representatives, dealers, resellers, and distributors to ensure that they do not share the price lists outside of the ClearOne sales channel. Moreover, ClearOne routinely marks the dealer price lists “Confidential” to make it clear that the price lists are not meant to be shared outside of those with a need to know. ClearOne also restricts the dissemination of price lists both internally at ClearOne and externally to manufacturer representatives, dealers, resellers, and distributors. Only employees with express authorization of the Sr. Vice President of Finance and their manager are authorized access to the price lists and, even then, only the specific price lists they require. With respect to external persons, only those specific price lists are shared that will assist the manufacturer representatives, dealers, resellers, and distributors in selling ClearOne products and the e-mail transmittal of the price lists contains language making clear to the recipient that the communication and attachment are confidential.

90. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

91. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

92. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] Shure's conduct caused ClearOne to lose sales that it would have otherwise not lost, if not for Shure's misappropriation.

93. As a proximate result of Shure's misappropriation, ClearOne has suffered, and will continue to suffer, actual damages, and Shure will be unjustly enriched, in sums not yet ascertained. ClearOne has also suffered and will continue to suffer immediate and irreparable harm, and will continue to suffer such injury until the breaches are preliminarily and permanently enjoined.

94. Shure's misappropriation was intentional, malicious, and in bad faith. It has subjected and will continue to subject ClearOne to unjust hardship in conscious disregard of ClearOne's rights, so as to justify an award of exemplary and punitive damages according to proof at trial. Under the DTSA, ClearOne is entitled to recover its reasonable attorneys' fees as a result of Shure's willful and malicious misappropriation.

COUNT III

Claim for Misappropriation of Trade Secrets Under the Illinois Trade Secrets Act (765 ILCS 1065) (Against Shure)

95. ClearOne incorporates by reference paragraphs 1 through 94 and Exhibits A to O attached hereto.

96. ClearOne's highly confidential price lists constitute protectable trade secrets, as defined in the Illinois Trade Secrets Act ("ITSA") at 765 ILCS 1065/2(d). ClearOne's successful business is directly dependent upon maintaining the secrecy of its trade secrets and other confidential and proprietary information. ClearOne's nonpublic dealer price lists for its products are business and economic information. The price lists derive independent economic value from being nonpublic because they provide ClearOne a competitive advantage in being able to offer preferable pricing to sell its products. If the price lists were publicly available, ClearOne's competitors would be able to use the price lists to, among other things, undercut ClearOne and win sales and harm ClearOne's ability to maintain fair and orderly pricing among its channel partners.

97. ClearOne takes reasonable measures to keep its price lists highly confidential. For example, it includes broad confidentiality provisions in its contracts with manufacturer representatives, dealers, resellers, and distributors to ensure that they do not share the price lists outside of the ClearOne sales channel. Moreover, ClearOne routinely marks the dealer price lists "Confidential" to make it clear that the price lists are not meant to be shared publicly. ClearOne also restricts the dissemination of price lists both internally at ClearOne and externally to manufacturer representatives, dealers, resellers, and distributors. Only employees with express authorization of the Sr. Vice President of Finance and their manager are authorized access to the price lists and, even then, only the specific price lists they require. With respect to external persons, only those specific price lists are shared that will assist the manufacturer representatives, dealers, resellers, and distributors in selling ClearOne products and the e-mail transmittal of the price lists contains language making clear to the recipient that the communication and attachment are confidential.

98.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

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99.

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[REDACTED]

[REDACTED]

100.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] Shure's conduct caused ClearOne to lose sales that it would have otherwise not lost, if not for Shure's misappropriation.

101.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

102. As a proximate result of Shure's misappropriation, ClearOne has suffered, and will continue to suffer, actual damages, and Shure will be unjustly enriched, in sums not yet ascertained. ClearOne has also suffered and will continue to suffer immediate and irreparable harm and will continue to suffer such injury until the breaches are preliminarily and permanently enjoined.

103. Shure's misappropriation was intentional, malicious, and in bad faith. It has subjected and will continue to subject ClearOne to unjust hardship in conscious disregard of ClearOne's rights, so as to justify an award of exemplary and punitive damages according to proof at trial. Under the ITSA, ClearOne is entitled to recover its reasonable attorneys' fees as a result of Shure's willful and malicious misappropriation.

PRAYER FOR RELIEF

WHEREFORE, ClearOne respectfully asks that the Court enter judgment against Shure as follows:

- A. That Shure has infringed (either literally or under the doctrine of equivalents), directly, jointly, and/or indirectly by way of inducing or contributing to the infringement of, one or more claims of ClearOne's '553 Patent;
- B. That Shure's infringement of the '553 Patent was willful;
- C. For temporary, preliminary, and permanent injunctive relief enjoining Shure and its officers, directors, agents, affiliates, employees, divisions, branches, subsidiaries, parents, and all others acting in active concert or participation with

it, from infringement, inducing the infringement, or contributing to the infringement of the '553 Patent;

- D. For an award to ClearOne for its damages, costs, expenses, and prejudgment and post-judgment interest for Shure's infringement of the '553 Patent as provided under 35 U.S.C. §§ 154(d) and 284;
- E. For an award to ClearOne for enhanced damages equal to treble the amount of actual damages, for the willful nature of Shure's acts of infringement as to the '553 Patent, with notice being made at least as early as the date of the filing of the complaint, as provided under 35 U.S.C. § 284;
- F. That this be declared an exceptional case within the meaning of 35 U.S.C. § 285 and that ClearOne be awarded its reasonable attorneys' fees against Shure;
- G. That Shure has misappropriated ClearOne's trade secrets under the DTSA, 18 U.S.C. § 1836, and ITSA, 765 ILCS 1065;
- H. For an award of actual loss, unjust enrichment, and/or reasonable royalty under the DTSA, 18 U.S.C. § 1836(b)(3), and ITSA, 765 ILCS 1065/4;
- I. For injunctive relief and/or an imposition of a reasonable royalty as compensation for future use, under the DTSA, 18 U.S.C. § 1836(b)(3), and ITSA, 765 ILCS 1065/3;
- J. For an award of reasonable attorney's fees under the DTSA, 18 U.S.C. § 1836(b)(3)(D), and ITSA, 765 ILCS 1065/5; and

For any and all other relief to which ClearOne may show itself to be entitled.

Dated: April 10, 2019

By: /s/ Garret A. Leach

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